

### **REMARKS**

The present application relates to hybrid maize plant and seed X1069G. Claims 1-41 are currently pending in the present application. Applicants respectfully requests consideration of the following remarks.

#### **Detailed Action**

##### *A. Status of the Application*

Applicants acknowledge the objection to claims 1, 5, 6, 7, 12 and 16 are withdrawn in view of Applicant's amendments and remarks regarding the deposit of biological materials.

##### *B. Claims and Specification*

Applicants acknowledge the addition of new claims 42 through 62, placed in the format suggested by the claims faxed by Supervisory Patent Examiner Amy Nelson on August 2, 2002 and again on November 15, 2002 by Examiner David Fox. The new claims do not add new matter as there is literal support for the claims in the originally filed specification (pages 44-56, specification). Finally, Applicants submit that the Deposits section has been amended in order to properly include both the hybrid maize plant X1069G and the inbred parents GE535769 and GE515721 within the deposit paragraph. The changes do not add new matter as there is literal support for the minor changes on page 7 in the originally filed specification. The specification has now been amended to correct these minor changes.

#### **Rejections Under 35 U.S.C. § 112, Second Paragraph**

Claims 1-4, 7, 9-11, 13-18, 21, 22-24, 26, 27, 29, 30, 31 and 32 remain rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. This rejection is repeated for reason of record as set forth in the last Office Action mailed July 16, 2002.

Claims 1 and 7 stand rejected for the parenthetical phrase "(commercial designation)" which renders the claims indefinite because it is unclear this is a limitation within the claim, hence it is unclear what the metes and bounds of the claim are. The Examiner states that deletion of this phrase would obviate this rejection.

Applicants have now amended claims 1 and 7 to delete the phrase "(commercial designation)", thereby alleviating this rejection. Applicants thank the Examiner for pointing out this unintentional mistake.

The Examiner rejects claims 2-4 as indefinite because the limitations within said claims do not obviate the indefiniteness of claim 1.

Applicants have now amended claim 1 by deleting the phrase "(commercial designation)", alleviating this rejection.

Claims 9, 13, 17, 22, 26 and 30 remain indefinite because the claims do not set forth any positive method steps leading to the maize plant at line 1 of the claims. The Examiner states it is unclear what the metes and bounds of the claimed methods are.

Applicants have canceled claims 9, 13, 17, 22, 26, and 30, thus alleviating this rejection. Applicants further acknowledge the addition of new claims 42 through 62, placed in the format suggested by the claims faxed by Supervisory Patent Examiner Amy Nelson on August 2, 2002 and again on November 15, 2002 by Examiner David Fox. The new claims do not add new matter as there is literal support for the claims in the originally filed specification (pages 44-56, specification).

The Examiner rejects claims 10, 14, 18, 23, 27 and 31 as being indefinite for being dependent upon an indefinite claim. The Examiner states the limitations within said claims do not obviate the indefiniteness of the claim upon which they depend.

Applicants have canceled claims 10, 14, 18, 23, 27 and 31, thus alleviating this rejection.

Claims 11, 15, 19, 24, 28 and 32 remain indefinite because the phrases "excellent yield potential", "good stalk lodging resistance" and "suited to... of the United States", for example, are relative and do not state the metes and bounds of the claimed invention.

Applicants have canceled claims 11, 15, 19, 24, 28 and 32, thereby alleviating this rejection.

The Examiner rejects claims 16 and 29 as indefinite because a hybrid maize plant is not produced by a backcrossing technique. The Examiner further states it is unclear what the metes and bounds of these claims are.

Applicants have canceled claims 16 and 29, alleviating this rejection.

Claims 8 and 21 remain indefinite because the plant of 2 and 20, respectively, are not male sterile. Applicants' amendments to claims 8 and 21 are noted. The Examiner further states

the claims remain indefinite because it is confusing to denote the fertile hybrid maize plant X1069G as male sterile. The Examiner suggests the cancellation of claims 8 and 21 and the submission of new claims 42-45.

Applicants respectfully traverse this rejection. Applicants submit support can be found on page 13 of the specification, wherein it states "[i]t should be understood that the inbred can, through routine manipulation of cytoplasmic or other factors, be produced in male-sterile form. Such embodiments are also contemplated within the scope of the present claims." Further, the specification states hybrid maize seed is typically produced by a male sterility system incorporating manual or mechanical detasseling" (page 2, specification). In addition, the "detasseling process can be avoided by using cytoplasmic male-sterile inbreds" (page 2, specification). As taught in the specification there are several methods of conferring male sterility. Therefore, Applicants assert that one skilled in the art would not find the terminology indefinite. In addition, claim 21 has now been canceled, alleviating this rejection.

The Examiner rejects claims 11, 15, 19, 24, 28 and 32 as indefinite for the broad recitation "relative maturity of approximately 105", and the claim also recites "(106 for physiological maturity)" which is the narrower statement of the range/limitation.

Applicants have now canceled claims 11, 15, 19, 24, 28 and 32, thereby alleviating this rejection.

In light of the above remarks, Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. § 112, second paragraph.

#### **Rejections Under 35 U.S.C. § 112, First Paragraph**

Claims 11, 15, 19, 24, 28, 32, 34, 39, 40 and 41 stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Examiner states that claims 11, 15, 19, 24, 29, 32, 39 and 40, the limitations "wherein said maize plant has derived at least 50% of its ancestral alleles from X1069G" and "deriving at least 50% of its ancestral alleles from X1069G" appear to be new matter, as the Examiner does not find literal support for this limitation in the specification.

Applicants have now canceled claims 11, 15, 19, 24, 28, 32, 34, 39, 40 and 41, thus alleviating this rejection. Applicants have added new claims 42 - 62, placed in the format suggested by the claims faxed by Supervisory Patent Examiner Amy Nelson on August 2, 2002 and again on November 15, 2002 by Examiner David Fox. Applicants believe the new claims come within the purview of the written description requirement and do not add new matter.

The Examiner rejects claims 34 and 41 as the subject matter directed to producing double haploids of the described hybrid maize plant X1069G appears to be new matter. The Examiner notes that it is not specified where claims 34 and 41 are supported in the instant specification that Applicant had contemplated such a claim at the time of Applicants' invention.

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Applicants have canceled claims 34 and 41, thereby alleviating this rejection. Applicants respectfully assert that the specification need not disclose what is well known in the art. See *In re Myers*, 161 U.S.P.Q. 668 (CCPA 1969). In addition, Applicant is attaching herewith Wan *et al.*, "Efficient Production of Doubled Haploid Plants Through Colchicine Treatment of Anther-Derived Maize Callus", *Theoretical and Applied Genetics*, 77:889-892, 1989, which supports Applicant's assertion that producing double haploids is well known to one ordinarily skilled in the art and therefore does not have to be described in the specification. Applicants further submit the specification states "[p]lant breeding techniques known in the art and used in a maize plant breeding program include, but are not limited to, recurrent selection backcrossing, pedigree breeding, restriction length polymorphism enhanced selection, genetic marker enhanced selection and transformation" (page 3, specification). It is well understood to one ordinarily skilled in the art that double haploids are produced by the doubling of a set of chromosomes (1N) from a heterozygous plant to produce a completely homozygous individual and that this is advantageous because the process can eliminate the generations of selfing needed to obtain a homozygous plant from a heterozygous source. Therefore, Applicants respectfully submit that new claims 47 and 55 are definite and come within the purview of the written description requirement and do not add new matter.

Claims 11, 12, 15, 16, 19, 24, 25, 28, 29 and 32 remain rejected and claims 8-10, 13, 14, 17, 18, 21-23, 26, 27, 30, 31 and 34-41 stand rejected under 35 U.S.C. § 112, first paragraph. The Examiner states this rejection is repeated for reason of record for claims 11, 12, 15, 16, 19, 24, 25, 28, 29 and 32. Claims 9, 10, 13, 14, 17, 18, 22, 23, 26, 27, 30 and 31 are now included in the rejection because these claims are broadly drawn to a method of using a multitude of non-

exemplified, uncharacterized breeding partners in an unlimited number of crosses, given the open claim language and the failure to specify that an F1 hybrid is produced. The Examiner further states that claims 8 and 21 are now included in the rejection because the specification does not describe a plant which is simultaneously male fertile and male sterile.

Applicants have now canceled claims 11, 12, 15, 16, 19, 24, 25, 28, 29 and 32 and claims 9-10, 13, 14, 17, 18, 21-23, 26, 27, 30, 31 and 34-41, thus alleviating this rejection. Applicants have amended claim 8 and added new claims 42 - 62, placed in the format suggested by the claims faxed by Supervisory Patent Examiner Amy Nelson on August 2, 2002 and again on November 15, 2002 by Examiner David Fox. Applicants believe the new claims come within the purview of the written description requirement and do not add new matter.

The Examiner states claims 13, 14, 17, 18, 26, 27, 30 and 31 remain rejected and claims 8-11, 12, 15, 16, 19, 21-24, 25, 28, 29, 32 and 34-41 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The Examiner states this rejection is repeated for reasons of record as set forth in the last Office Action for claims 13, 14, 17, 18, 26, 27, 30 and 31. Claims 8-11, 12, 15, 16, 19, 21-24, 25, 28, 29, 32, 34 and 35-41 are now included in the rejection because these claims are broadly drawn to non-exemplified progeny plants, methods of using a multitude of non-exemplified, uncharacterized breeding partners in an unlimited number of crosses, given the open claim language and the failure to specify that an F1 hybrid is produced. The Examiner further states claims 8 and 21 are now included in the rejection because the specification does not describe a plant which is simultaneously male fertile and male sterile.

Applicants have now canceled claims 13, 14, 17, 18, 26, 27, 30 and 31 and claims 9-11, 12, 15, 16, 19, 21-24, 25, 28, 29, 32 and 34-41, alleviating this rejection. Applicants have amended claim 8 and added new claims 42 - 62, placed in the format suggested by the claims faxed by Supervisory Patent Examiner Amy Nelson on August 2, 2002 and again on November 15, 2002 by Examiner David Fox. Applicants believes the new claims come within the purview of the written description requirement and do not add new matter.

In light of the above remarks, Applicants respectfully request reconsideration and withdrawal of the rejections to claims 9-19, 22-32, and 34-41 under 35 U.S.C. § 112, first paragraph.

### Issues Under 35 U.S.C. § 102/103

Claims 11, 15, 19, 24, 28, 31 and 32 remain rejected and claims 36, 37, 39 and 40 stand rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Fullerton (U.S. Patent 6,169,234 B1). The Examiner asserts this rejection is repeated for the reason of record as set forth in the last Office Action mailed July 16, 2002. The Examiner concludes stating that the claimed invention is *prima facie* obvious as a whole to one of ordinary skill in the art at the time it was made, if not anticipated by Fullerton.

Applicants have canceled claims 11, 15, 19, 24, 28, 31, 32 and claims 36, 37, 39 and 40, thereby alleviating this rejection. Applicants have now amended claim 8 and added new claims 42 – 62, placed in the format suggested by the claims faxed by Supervisory Patent Examiner Amy Nelson on August 2, 2002 and again on November 15, 2002 by Examiner David Fox. Further, Applicants submit *In re Thorpe*, states that “a product by process claim may be properly rejected over prior art teaching the same product produced by a different process”, as noted by the Examiner. *In re Thorpe*, 227 U.S.P.Q. 964, 966 (Fed. Cir. 1985). However, Applicants submit that this is not the same product physiologically or morphologically as the cited prior art as can be evidenced by one skilled in the art through analysis of the data tables in each. In addition, it is impermissible to use hindsight reconstruction and the benefit of Applicant's disclosure to pick among pieces which are present in the art, there must be some suggestion to make the combination and an expectation of success. *In re Vaeck*, 20 U.S.P.Q.2d 1434 (Fed. Cir. 1991). Moreover, Applicants claim a method of making a plant which did not previously exist. Pursuant to the recent Federal Circuit decision, *Elan Pharmaceuticals, Inc. v. Mayo Foundation for Medical Education & Research*, 304 F.3d 1221, (Fed. Cir. 2002), “a novel patented product is not “anticipated” if it did not previously exist.” *Id.* This is the case whether or not the process for making the new product is generally known. *Id.* The invention X1069G has not previously existed as it is the result of crossing two maize inbred lines GE535769 and GE515721 therefore Applicants strongly assert that neither the suggestion of the claimed unique invention of the present application nor the expectation of success is taught for one ordinarily skilled in the art in the reference cited by the Examiner.

In light of the above, Applicants respectfully request the Examiner withdraw the rejection under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Fullerton (U.S. Patent 6,169,234 B1).

**Double Patenting**

The Examiner rejects claims 11, 15, 19, 24, 28, 31 and 32, 34, 36, 37, 39, 40 and 41 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7, 10-12, 20, 26 and 29 of U.S. Patent No. 6,169,234 ('234). The Examiner states that although the conflicting claims are not identical, they are not patentably distinct from each other because the X1069G maize hybrid of the instant invention shares a common parent with the 36B08 maize hybrid of Fullerton, that being the proprietary inbred maize line GE515721. The Examiner states that while the hybrid maize plant of Fullerton is designated 36B08 and the hybrid maize plant of the instant claims is designated X1069G, there are insufficient identifying characteristics set forth in the claims to distinguish progeny of the claimed plants wherein the exemplified X1069G hybrid maize plant is an ancestor from progeny of the 36B08 hybrid maize plant of the prior art.

Applicants respectfully traverse this rejection. Claims 11, 15, 19, 24, 28, 31 and 32, 34, 36, 37, 39, 40 and 41 are patentably distinct because they involve a novel maize seed, plants, plant parts, and methods. Applicants would like to point out that the inventions X1069G and 36B08 are not the same inventions. Nor are their differences minor morphological variations. Applicants submit that the claimed plant cannot be rendered obvious as it possesses a unique combination of traits which confers a unique combination of genetics. Moreover, Applicants claim a method of making a plant which did not previously exist. Pursuant to the recent Federal Circuit decision, *Elan Pharmaceuticals, Inc. v. Mayo Foundation for Medical Education & Research*, 304 F.3d 1221, (Fed. Cir. 2002), "a novel patented product is not "anticipated" if it did not previously exist." *Id.* This is the case whether or not the process for making the new product is generally known. *Id.* The invention X1069G has not previously existed as it is the result of crossing two maize inbred lines GE535769 and GE515721. Applicants further assert the use of the designation "X1069G" is not arbitrarily assigned. It is common practice within plant breeding that a new and distinct maize seed is designated with a numerical number such as X1069G which defines the claimed hybrid maize seed which will be deposited under an ATCC accession number. The use of such a designation is a common practice within the art and would be well understood by one skilled in the art to be two distinct and unrelated hybrid maize seeds. In addition, as provided in 37 C.F.R. §§ 1.801-1.809, Applicants respectfully submit that the

actual ATCC deposit will be delayed until the receipt of notice that the application is otherwise in condition for allowance. Applicants will refrain from deposit of Hybrid X1069G and inbred parents GE535769 and GE515721 until allowable subject matter is indicated. Once such notice is received, an ATCC deposit will be made, and the specification will be amended to contain the accession number of the deposit, the date of the deposit, a description of the deposited biological material sufficient to specifically identify it and to permit examination and the name and address of the depository. The claims will also be amended to recite the ATCC deposit number. In addition, Applicant submits that at least 2,500 seeds of Variety X1069G will be deposited with the ATCC. Nonetheless, claims 11, 15, 19, 24, 28, 31 and 32, 34, 36, 37, 39, 40 and 41 have now been canceled thereby alleviating the rejection under the judicially created doctrine of obviousness-type double patenting. Such action is respectfully requested.

Applicants acknowledge that claims 5, 6, 20 and 33 are allowed.

### Conclusion

In conclusion, Applicants submit in light of the above amendments and remarks, the claims as amended are in a condition for allowance, and reconsideration is respectfully requested.

No additional fees or extensions of time are believed to be due in connection with this amendment; however, consider this a request for any extension inadvertently omitted, and charge any additional fees to Deposit Account No. 26-0084.

Reconsideration and allowance is respectfully requested.

Respectfully submitted,



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